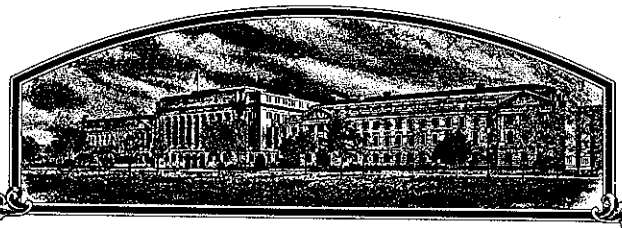
No. 8400099



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

B. B. Collier – Barney A. Smith

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS REQUIRED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Collier'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 29th *day of* November *in the year of our Lord one thousand nine hundred and* eighty-five.

Attest:

Kenneth A. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

John R. Block
Secretary of Agriculture

APPROVAL EXPIRES 4-30-85

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	3. VARIETY NAME
B. B. Collier - Barney A. Smith		Collier

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*	5. PHONE *(Include area code)*	FOR OFFICIAL USE ONLY
2162 Kings Chapel Road Perry, Georgia 31069	Collier-912/987-2099 Smith-912/929-2756	PVPO NUMBER 8400099

6. GENUS AND SPECIES NAME	7. FAMILY NAME *(Botanical)*	FILING
Glycine max L. Merrill	Leguminosae	DATE 5/14/84 TIME 2:30 ☐ A.M. ☒ P.M.

8. KIND NAME	9. DATE OF DETERMINATION	FEES RECEIVED
Soybeans	1980	AMOUNT FOR FILING $ 1,800 DATE 5/14/84 AMOUNT FOR CERTIFICATE $ 200 DATE 9/19/85

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Mr. Larry Walker, Walker, Richardson, Hulbert & Gray
909 Ball Street
P. O. Box 1234
Perry, Georgia 31069

SEND ORIGINAL LETTERS TO THE APPLICANT — WITH A COPY TO MR. LARRY WALKER RJS

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. ☒ Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*

b. ☒ Exhibit B, Novelty Statement

c. ☒ Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*

d. ☒ Exhibit D, Additional Description of the Variety

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act.)* ☒ Yes *(If "Yes," answer items 16 and 17 below)* ☐ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ Yes ☒ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? ☒ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? ☐ Yes *(If "Yes," give date)* ☒ No

19. HAS THE VARIETY BEEN OFFERED FOR SALE OR MARKETED IN THE U.S. OR OTHER COUNTRIES? ☒ Yes *(If "Yes," give names of countries and dates)* U.S. - 1984 ☐ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT	DATE
B. B. Collier	4-20-84
SIGNATURE OF APPLICANT Barney A. Smith	DATE 4-20-84

FORM LMGS-470 (8-83) Edition of 9-81 is obsolete)

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14. EXHIBIT A

COLLIER SOYBEAN

Discovery of a natural cross in Hutton soybeans.

Collier is a tall, late, maturing variety (8 to 10 days later than Hutton) with dense gray pubesence. Collier has appeared stable and uniform through five generations of seed increase. Purple flowered off types appear 1:5000.

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14. EXHIBIT B

NOVELTY STATEMENT

Collier is most similar to Cobb in plant type, pubesence, flower color and time of maturity. Collier differs from Cobb in having denser pubesence, larger leaves, more 3 seeded pods, ~~brown seed hilum color (vs. buff for Cobb)~~ and larger seeds than Cobb.

OMITTED PER APPLICANT'S LETER OF 6/18/84 HJS
AND MR. J. M. WOODRUFF'S LETTER of 8/2/84 8/13/84

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COOPERATIVE EXTENSION SERVICE

EXHIBIT B R/S 8/13/84

THE UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE

P. O. Box 1209
Tifton, Georgia 31793
August 2, 1984

Mr. Robert J. Snyder, Examiner
Plant Variety Protection Office
USDA, National Agriculture Library Building
Beltsville, MD 20705

RE: Soybean Application No. 8400099, "Collier"

Dear Mr. Snyder:

Mr. Bennie Collier asked that I share with you my experiences and observations on "Collier" soybeans. You have my permission to use the following comments in establishing uniqueness for the Collier variety if you desire them.

I first observed "Collier" soybeans in 1982 at Mr. Collier's farm near Perry, Georgia. The variety is distinctly different than any variety currently being grown in this region. I suggested to Mr. Collier that the variety more closely resembled the Cobb variety than any other variety for the following reasons:

(1) both are determinate varieties of late Group VIII maturity. (At Perry, both mature October 25 to 29 with May - Early June planting).
(2) both have white flowers
(3) both have gray pubesence
(4) both have large round ovate leaves
(5) both have buff seed hilam color

I have planted "Collier" in eight variety tests and have observed the following differences:

(1) "Collier" has 100% more pubesence hairs than Cobb or any other soybean variety grown in this region (I have never seen any variety similar in this respect.)
(2) Collier has predominately 3-seeded pods, Cobb has predominately 2-seeded pods.
(3) Collier has very large seed (18 to 22 gram/100 seed is common). Cobb seed normally are small, weigh 14 to 16 grams/100 seed.
(4) Collier is more sensitive to metribuzin herbicide than is Cobb.

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(5) In my tests, Collier has consistantly been taller than Cobb by 4 to 6 inches.
(6) Canopy appearance, for the two varieties differs. Collier canopies tend to be tall and narrow, Cobb tends to be shorter with many more lateral branches.

Leaf-petiole exhibits for both Collier and Cobb are enclosed. I collected these from my test at Spence field near Moultrie, Georgia, July 26, 1984.

I trust that these comments will be of value. Please feel free to contact me if I can be of further assistance.

Sincerely,

John M. Woodruff

John M. Woodruff
Extension Agronomist
Soybeans

JMW:am

Encl.

FORM APPROVED: OMB NO. 0581-0066

EXHIBIT C
(Soybean)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

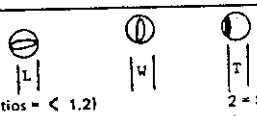
NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
B. B. Collier - Barney A. Smith		Collier

ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*	FOR OFFICIAL USE ONLY PVPO NUMBER
2162 Kings Chapel Road Perry, Georgia 31069	8400099

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]).

1. SEED SHAPE:

[4]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

2. SEED COAT COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[1] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

4. SEED SIZE: (Mature Seed)

[2][1] Grams per 100 seeds

5. HILUM COLOR: (Mature Seed)

[1] RJS 5/13/84
1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

6. COTYLEDON COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green

7. SEED PROTEIN PEROXIDASE ACTIVITY:

[1] 1 = Low 2 = High

8. SEED PROTEIN ELECTROPHORETIC BAND:

[1] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

9. HYPOCOTYL COLOR:

[1] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

10. LEAFLET SHAPE:

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

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11. LEAFLET SIZE:

[3] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17')
3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton')
3 = Dark Green ('Gnome'; 'Tracy')

13. FLOWER COLOR:

[1] 1 = White 2 = Purple 3 = White with purple throat

14. POD COLOR:

[1] 1 = Tan 2 = Brown 3 = Black

15. PLANT PUBESCENCE COLOR:

[1] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[2] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton')
3 = Bushy ('Gnome'; 'Govan')

17. PLANT HABIT:

[1] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will')
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

18. MATURITY GROUP:

[1][1] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V
9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

[2] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

[2] Bacterial Blight *(Pseudomonas glycinea)*

[2] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

[0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

[0] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Other *(Specify)* _____

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

[0] Brown Stem Rot *(Cephalosporium gregatum)*

[0] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

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19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

[0] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[2] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

[0] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Race 6 [ ] Race 7

[0] Race 8 [ ] Race 9 [ ] Other *(Specify)* _____

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

[0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

[0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

[0] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

[0] Southern Root Knot Nematode *(Meloidogyne incognita)*

[0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[0] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[0] OTHER DISEASE NOT ON FORM *(Specify)*: _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Iron Chlorosis on Calcareous Soil

[ ] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[0] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Stewart	Seed Coat Luster	Deltapine 105
Leaf Shape	Hutton	Seed Size	Hutton
Leaf Color	Braxton	Seed Shape	Portage
Leaf Size	Braxton	Seedling Pigmentation	Deltapine 105

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23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
Collier (Submitted)	168	2	100	6.0	10.0	43	18	21	3
Cobb (Name of Similar Variety)	167	3	88	6.0	8.0	38.6	18.6	15	2

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

14. EXHIBIT D

Collier has extremely dense gray pubesence and white flowers. ~~Seed hilum color is mostly brown about 1/2% range from buff to black~~. Plants tend to be tall (18 to 21 nodes) and bushy.

OMITTED PER APPLICANT'S LETTER OF 6/18/84 AND M/R. J.M. WOODRUFF'S LETTER OF 8/2/84.
M/S 8/13/84